TECHNICAL BOOK REVIEW INDEX

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ANTHONY A. MARTIN, *Editor*

Volume 22 **December, 1956** **Number 10**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Aller, Lawrence H.

Gaseous nebulae. 322p. 1956. Wiley, New York, $11. (International astrophysics series, v.3.)

Journal of applied physics, Oct. 1956, p.1255. 9 l.

"Aim of the International Astrophysics Series . . . is to present the main fields of astrophysics and radioastronomy for specialists and students. Physicists in other fields may be interested in the present volume, especially in the chapters on methods of observations, physical processes in nebulae, and the 'forbidden' lines. Other chapters deal with dimensions and spectra, stars illuminating nebulae, structure and internal motions, and diffuse nebulae."

Science, Nov. 16, 1956, p.986. 1⅛ col.

"One has to be grateful to Aller for providing us with another volume containing a wealth of material, both observational and theoretical, presented in a clear and concise manner . . . Should provide one of the standard textbooks on the subject for some time to come. It seems, however, to me that it will be impossible for the general reader to get much benefit from this volume, unless he has a sound working knowledge of astrophysics." *D. ter Haar.*

Amos, Stanley W., and others.

Television engineering. v.2: Video-frequency amplification. 272p. 1956. Philosophical Library, New York, $15.

Electronic engineering, Nov. 1956, p.506. 1 col.

"Written for and . . . mainly useful to the engineers working on the transmitting end of television. Most receiver engineers are unlikely to need to know so much about video frequency amplification. An exception would be those engineers concerned with distributing or relaying television at video frequencies. As would be expected from the two authors, the book is extremely workmanlike and covers the subject thoroughly and in a readable and interesting manner." *C. H. Banthorpe.*

Engineer, Nov. 2, 1956, p.619. ⅞ col.

"Based on an internal B.B.C. manual, and shows the clarity and precision so often found in works based on teaching notes. The only criticisms which can be reasonably levelled are: first, an irritating interpolation of mathematical appendices throughout the book and, secondly, an uncertainty concerning the level of knowledge required of the reader . . . However, these are trivial comments on a useful and workmanlike book . . . For the general electronic engineer with a modest mathematical equipment, this book should prove useful: to the specialist it will be inadequate, particularly since the Bibliography is so brief."

Technician & circuit digests, Oct. 1956, p.20. 8 l.

"A fairly deep technical analysis of the subject. Included are discussions on high and low frequency circuits, coupling and decoupling, phase equalizers, feedback and noise. Suitable for engineers and very advanced technicians."

Anderson, Harry Warren.

Diseases of fruit crops. 501p. 1956. McGraw, New York, $8.50.

Soil science, Oct. 1956, p.345. ⅓ p.

"A highly useful book dealing with diseases of pome and stone fruits, brambles, grapes, strawberries, gooseberries, currants, cranberries, and blueberries . . . The author limits himself . . . strictly to bacterial, fungus, virus, and nematode diseases. He confines his discussion of non-parasitic diseases almost entirely to peaches, and that in relation mostly to a very short statement on nutritional deficiencies and spray injury . . . The book, with its excellent discussion and good illustrations of parasitic diseases, fills an important need."

Auerbach, Charlotte.

Genetics in the atomic age. 106p. 1956. Essential Bks., 270 Madison Ave., New York, $2.

Bulletin of the atomic scientists, Nov. 1956, p.349. ⅝ col.

"Dr. Auerbach describes very lucidly and simply the basic processes of reproduction and growth which determine the hereditary nature of human beings—and of all other life—and how this hereditary nature is changed by mutations. Her book should be required reading by everyone capable of understanding the simplest explanations of an inherently technical matter, for the matter here is of the utmost import to the long-term survival of our race. In particular, one would like to put the book into the hands of dentists and doctors, especially radiologists . . . Read it." *Alexander Langsdorf, jr.*

Bailar, John C., jr., ed.

Chemistry of coordination compounds. 844p. 1956. Reinhold, New York, $18.50. (American Chemical Society. Monograph series, no.131.)

Plating, Oct. 1956, p.1230. ¼ col.

"Offers a highly authoritative, critical review of the entire subject. Twenty-four experts, each known for his original investigations of coordination problems, have contributed carefully balanced discussions. More than 3,000 references offer ready access to the entire body of published literature on the subject . . . An indispensable addition to the reference shelf of every metallurgist."

Berg, W. F.

Exposure. Ed.2. 443p. 1955. American Photographic Pub. Co., 33 W. 60th St., New York, $5.

Journal of the Optical Society of America, Nov. 1956, p.1001. ⅜ col.

"Dr. Berg presents the subject of exposure from the standpoint of the scientist, although the book is directed toward the working photographer. But in spite of his obvious intent to write in a popular style and to avoid mathematics, not many photographers will be able to follow all of his discussions. He has, however, been most successful in isolating the variables of photographic exposure in such complete detail that practical photographers now will be better able to understand the extreme difficulties which photographic scientists have in accounting for the numerous excellent photographs produced by people ignorant of physics and meteorology. At the same time one can gain much information of real value for coping with everyday problems in photographic exposure." *Lloyd E. Varden.*

Bergaust, Erik, & **Beller,** William.

Satellite. 287p. 1956. Hanover House, New York, $3.95.

Aero digest, Oct. 1956, p.15. ⅜ col.

"A semi-technical book that describes in detail the present state of the artificial satellite art . . . Only book out on the subject . . . Actually, the book is quite readable, from its introduction . . . to its concluding chapter . . . After tracing the history of the early orbiter designs, the authors give the technical facts behind Project *Vanguard* and describe the environment the first satellite will be exploring."

Bevan, Thomas.

Theory of machines. Ed.3. 621p. 1956. Longmans, New York, 26s. net.

Engineer, Oct. 19, 1956, p.550. ⅛ col.

"Contains additional matter in the section on gyroscopes which, however, is still confusing on the subject of stabilisation; the use of motor-driven fins on ships is not mentioned. Also enlarged is the treatment of epicyclic gears; in addition to direct computation, four methods — algebraic, tabular, graphical, and vector—are given for determining gear ratios in such trains. With such an armoury the student should readily discover that the answer given to an example on the Ford 'T' transmission is palpably wrong."

Mechanical world, Nov. 1956, p.522. ⅜ col.

"The additional matter is gyroscopic motion, velocity and acceleration diagrams, toothed gearing, epicyclic trains, inertia forces in mechanisms, and vibrations . . . Well provided with worked examples, and examples for practice with answers. There is an extensive bibliography and a comprehensive index makes for continued use of the text for reference."

Bevins, Lewis G.

Electronic tubes, circuits, and devices. 620p. 1956. Universal Scientific Co., Inc., 1102 Shelby St., Vincennes, Ind., $4.50 unbound.

Electronic industries & tele-tech, Nov. 1956, p.36. ¼ col.

"A combination textbook and manual covering the field of fundamental electronic principles and their practical application . . . Covers radio transmitting and receiving principles, radar, and TV principles and fundamentals of industrial electronic controls . . . Profusely illustrated with photographs, schematics, and graphs. All exercises can be performed and comprehended without a knowledge of mathematics being required."

Binder, R. C.

Mechanics of the roller chain drive. 204p. 1956. Prentice-Hall, Englewood Cliffs, N. J., $5.

Machine design, Oct. 18, 1956, p.212. ¼ col.

"Treats a roller chain drive under both static and dynamic conditions and involves theoretical and mathematical studies covering such subjects as basic force relations occurring in a chain joint, relative velocity and impact between chain roller and sprocket when meshing, and effects of sprocket tooth design. Also discussed are angular velocity variation in sprockets, joint frictional losses, vibrations of a span of chain and its path of travel between sprockets, and possible organization of power capacity relations on basis of wear, vibration, and impact."

Brownell, G. L. See **Hine,** Gerald J., & **Brownell,** G. L., ed.

Buerger, M. J.

Elementary crystallography. 528p. 1956. Wiley, New York, $8.75.

Journal of applied physics, Oct. 1956, p.1255. 7 l.

"There are three main sections in this textbook on the symmetry properties of crystals . . . First half . . . is devoted to a study of the macroscopic symmetries of crystals. The next section analyzes the internal symmetries of crystals, and the book closes with a dis-

cussion of group theory and its applications to crystallography. Except for this last section, only elementary mathematics is required."

Rocks and minerals, Sept.-Oct. 1956, p.510. ⅛ col.

"The first single book to present a rational introduction to the vast and interesting science of crystallography . . . Introduces the student to the science by offering much more than a collection of facts and conclusions . . . Provides a penetrating study of the symmetry properties of crystals, which are basic to all other phases of crystallography. Thus it gives the student the firm foundation in symmetry theory that he needs for any further intelligent study of crystals or of the parts of other sciences which deal with crystals."

Buist, J. M.

Ageing and weathering of rubber. 144p. Institution of the Rubber Industry, 4 Kensington Palace Gardens, London, W.8, $4.

Rubber age, Nov. 1956, p.360. ⅝ col.

"Deals lucidly and comprehensively with the theory and prevention of the degradation of rubbers. Written by an acknowledged expert, it covers the aging of raw and vulcanized rubbers, covering both the fundamental chemistry governing the reactions involved and the contribution attributable to basic physical factors . . . The author is thorough in his approach in that not only are standard aging methods discussed and evaluated, but he also enters into additional methods, principally oxygen absorption tests and stress relaxation tests."

Cardwell, Viola.

Cerebral palsy; advances in care and treatment. 625p. 1956. Association for the Aid of Crippled Children, 345 E. 46th St., New York, $5.

American journal of public health, Nov. 1956, p.1469. 1⅛ col.

"An excellent book . . . The author has attempted the almost impossible task of describing not only the etiology, pathology, and treatment of cerebral palsy, but also the features and management of the many additional handicaps which may complicate the initial lesion . . . Miss Cardwell has read extensively, and her references are wide and numerous, so that the facts given make this a book which must be read by everyone interested in the care and management of the cerebral palsied child." *George A. Pollock.*

Carman, P. C.

Flow of gases through porous media. 183p. 1956. Academic Press, New York, $6.

Aeronautical engineering review, Nov. 1956, p.175. ⅛ col.

"Provides an integrated and quantitative account of the flow processes involved when gases flow into or through fine-pored media . . . Presents a connected account of the current knowledge on the subject, both theoretical and practical, rather than indulging in specific technical applications. The subject is approached from the viewpoint of the Kozeny theory; its limitations are fully discussed for consolidated media for high porosities and for relative permeability, with particular attention to the question of pore size distribution . . . The appendixes include an author index, a subject index, and a table of symbols used in the text."

Journal of applied physics, Oct. 1956, p.1256. 7 l.

"Although some of the analysis in this book applies to liquids, the principal subject is the flow of gases. Viscous, slip, free molecule, diffusional, and turbulent flows are studied, and particular attention is paid to the pore size distribution. Applications of the theory to the permeability method of surface area measurement and to the separation of gas mixtures (as in gas chromatography) are described."

Carrington, Richard.

The story of our earth. 240p. 1956. Harper, New York, $3.

Discovery, Oct. 1956, p.436. ⅔ col.

"Mr Carrington has tried to show what scientists have done to unravel the secrets of earth history, how they came to do it, and their successes and failures by the way. On the whole his fluent pen has done this well. Much of the story is fascinating, and not the least of its wonder is that so many of the discoveries originated in England . . . Well produced and abundantly illustrated . . . Can be recommended to those workers in other fields who want to know what geologists have been doing, and also to the student." *W. E. Swinton.*

Frontiers, Oct. 1956, p.23. ⅞ col.

"Two subjects ever new, no matter how often they are treated, are the theme of this excellent book by a Briton. What was the origin of the earth? What was the origin of life? Carrington first marshals the chief theories of the past, then sets forth the beliefs of present-day scientists. The value of his work lies in his meticulous treatment of each field of investigation yielding knowledge of the two major questions . . . An admirable example of the hradest [sic] kind of writing ably done . . . Illustrated with interesting black-and-white drawings by Maurice Wilson."

Carroll, John M.

Mechanical design for electronic production. 360p. 1956. McGraw, New York, $8.50.

Industrial laboratories, Nov. 1956, p.31. ⅛ col.

"A new design aid which gives information on the special problems of manufacturing devices using electron tubes and transistors. The treatment follows the steps of the designer who must translate an aggregation of electronic breadboard circuits to an item of finished equipment sufficiently rugged to withstand its intended environment and able to be manufactured for the lowest possible cost. Information on a variety of processes and materials is given."

Insulation, Nov. 1956, p.54. 12 l.

"Includes information on mechanical layout of equipment, sheet-metal work, machining operations, electric and magnetic shielding, use of resins and other sealing compounds, and mechanisms and electric motors. Some of the other subjects covered are modular design, plastic compounds, etched wiring, and design of equipment to withstand vibration, high temperatures, and humidity."

Cherry, Colin, ed.
Information theory. 401p. 1956. Butterworth & Co., (Publishers), Ltd., 88 Kingsway, London, W.C.2, 70s.

Post Office Electrical Engineers' journal, Oct. 1956, p.278. ¾ col.

"Thirty-six papers and four summaries of papers presented to the Symposium are collected in this volume; in most cases a brief record of the discussion of the paper is appended . . . About half the book is not intelligible to the ordinary reader on account of extensive use of mathematical or other strange symbols or unfamiliar terminology. On the other hand a dozen or so of the papers might find a place by the bedside of those who enjoy reading philosophical essays, irrespective of the subject matter . . . It would be a mistake to pick up this book expecting to learn much about Information Theory. It is not a text book." *W. W.*

Clark, Ronald W.
Picture history of mountaineering. 350p. 1956. Macmillan, New York, $5.95.

Natural history, Oct. 1956, p.448. ⅞ col. including another review.

"Attempts to span mountaineering history from the time of the first known ascents of some minor peaks . . . to present day climbing activities . . . As a general history of mountaineering the book is inadequate. The space given to all kinds of British climbing . . . is disproportionate to the scant, perfunctory attention given to climbing activities in other countries . . . Should simply have been titled 'A History of *British* Climbing' of which it is a thorough, if somewhat unimaginative, account." *Evelyn Cropper & William Cropper.*

Cohen, John, & **Hansel,** Mark.
Risk and gambling; the study of subjective probability. 153p. 1956. Philosophical Library, New York, $3.50.

School science and mathematics, Nov. 1956, p.679. ½ p.

"Despite certain implications in the title, the book is not a short course for 'card sharps.' Rather it is an experimental study of subjective probability and risk-taking. The first aim of the study is to discover, if possible, the way people actually choose, estimate, predict, judge or take risks when they are required to make judgments on partial information. The second aim is to trace the changes that occur in these activities as a person grows older. Finally, the authors hope to determine whether the 'guesses' indicated above follow their own psychological rules and how these rules compare with the laws of mathematical probability . . . Every mathematician interested in statistics should read this book for a renewal of perspective." *George G. Mallinson.*

Comings, Edward W.
High pressure technology. 572p. McGraw, New York, $11.50.

Petroleum refiner, Oct. 1956, p.218. ½ col.

"First book to cover the whole field of high pressure technology, and yet present this subject in a style that can be understood by the senior student of chemical engineering. The central theme is the influence of elevated pressure on chemical and physical systems, and on the equipment designed for handling these systems, either experimentally or on a commercial scale . . . The work is quite unique in that the author is concerned with both the theory and the art of applying high pressure in the laboratory and in industrial chemical processes. Extensive appendixes supply data for problems, calculations, and design."

Cook, Philip G.
Latex; natural and synthetic. 232p. 1956. Reinhold, New York, $3.50. (Reinhold pilot bk.)

Rubber age, Oct. 1956, p.145. ¼ col.

"Purpose . . . is to show how both natural and synthetic types of rubber latex are produced, modified, and finally converted into useful products . . . Not intended for the latex expert, but rather for the newcomers in the field, as well as for those in allied industries and students of industrial chemistry in general. Topics covered include production and importation, testing, vulcanization, compounding, processing and testing of compounds, synthetic rubber latices, rubber-plastic latices, and latex products."

Crampton, E. W.
Applied animal nutrition. 458p. 1956. Freeman, San Francisco, $6.50.

Agricultural engineering, Oct. 1956, p.714. ⅓ col.

"Concerned with the application of scientific knowledge to the every-day feeding of livestock . . . Written to help bridge the gap between animal nutrition and livestock feeding practice."

Culver, Charles A.
Musical acoustics. Ed.4. 205p. 1956. McGraw, New York, $6.

Journal of applied physics, Oct. 1956, p.1256. 8 l.

"The discussion of the basic concepts of acoustics in this book will be familiar to most readers of this journal, since the book is intended as a text for college students majoring in music. The discussions of hearing, tone quality, and musical scales may be less familiar to physicists . . . Chapters on individual musical instruments and their spectra and on the recording and reproduction of music may be especially interesting to the physicist."

Cumming, Alexander C., & **Kay,** S. A.
Quantitative chemical analysis. Ed.11, revised by R. A. Chalmers. 540p. 1956. Oliver, Edinburgh, 30s.

Chemical age, Oct. 27, 1956, p.179. 1 col.

"Dr. Chalmers is to be congratulated in his careful selection of those older methods which had to be omitted from the new text and for his wise choice of new material . . . New features in the present edition are: A new section on colorimetry and spectrophotometry with very many exercises; a brief non-mathematical treatment of the nature of precipitates in gravimetric analysis; and a chapter on the elementary aspects of modern physiochemical methods of analysis . . . Well-balanced, well-written and refreshingly modern in outlook . . . Can be recommended with confidence." *T. S. West.*

Curtis, J. T.

Plant ecology workbook. 87p. 1956. Burgess, Minneapolis, $3.25.

Bulletin of the Torrey Botanical Club, Sept.-Oct. 1956, p.390. ½ p.

"Upon completing the perusal of this manual I was perplexed. It is sound, factual. But it is orthodox to a point beyond merely conservative where I was looking for a dynamic and progressive approach reflecting that of the department and the staff from which it originated. The author is internationally known for his field work and for his progressive ideas about vegetation but this course can apparently be completed with practically no experience in the field." *John A. Small.*

Darlington, C. D.

Chromosome botany. 186p. 1956. Macmillan, New York, $2.75.

Science, Oct. 12, 1956, p.688. ⅞ col.

"*Chromosome Botany* is too limited in its scope to be used as a textbook, but it should be of interest to all botanists, agronomists, and horticulturists who are interested in the evolution, relationships, and improvement of plant species and varieties." *Karl Sax.*

Denning, Rick A., & **Kane,** N. M.

Applied thermodynamics. 89p. Pelex Pub., Inc., 149 Broadway, New York, $4.

Product engineering, Nov. 1956, p.435, 439. ⅓ col.

"Not a formal textbook on thermodynamics but . . . written primarily for use by engineers reviewing for their New York State professional engineering examination . . . A summary of working parts on the subject of thermodynamics and includes (1) combustion and compression flow, (2) engine and vapor cycles, (3) steam turbines, (4) heat transfer, and (5) air conditioning and refrigeration . . . Sufficient theory precedes the solved problems to enable them to be followed with facility . . . Also of value to practicing engineers who desire a rapid reference to practical problems."

Dugan, James.

Man under the sea. 332p. 1956. Harper, New York, $5.

Frontiers, Oct. 1956, p.21. 1 col.

"This big, solid book could be a complete history of diving. If it is not, it will do until a better appears. Coming when undersea exploration and biological research are of first consideration, it should have a large and continuing public. Persons who have been collecting the recent skin-diving books should not expect with this one more dramatic account of picturesque exploits. The author is a painstaking, serious researcher who goes into infinite detail about such basic things as the physiological problems met and solved down through the years. He does not sacrifice fact for literary effect. At times he seems to be plodding; the reader must give close attention to the densely-packed pages if he is not to lose the analysis of important events during the formative period when man was learning about pressure and blood chemistry . . . Dugan appends a chronology, a fine bibliography, an index, and numerous charts . . . A source book without which serious investigators will be rather lame."

Emmett, Paul H., ed.

Catalysis. v.4: Hydrogen synthesis, hydrogenation and cyclization. 570p. 1956. Reinhold, New York, $12.50.

Industrial laboratories, Nov. 1956, p.34. ⅛ col.

"Primarily devoted to the physical chemical aspects of Fischer-Tropsch synthesis. U. S. Bureau of Mines contributors present extensive treatises on selected topics which makes this volume a useful reference for petroleum and coal chemists." *Charles H. Riesz.*

Oil and gas journal, Oct. 22, 1956, p.114. ⅛ col.

"Concerns hydrocarbon synthesis, hydrogenation, and cyclization . . . Provides research chemists with the most soundly conceived reference source on physical chemistry of catalysis and catalytic processing . . . Will be of particular interest to the petroleum and coal industries . . . Devoted entirely to the Fischer-Tropsch synthesis and considers such important topics as the hydrogenation of carbon monoxide and related reactions, methanation, catalytic hydrogenation of coal and tar, and catalytic cyclization and aromatization of hydrocarbons."

Ference, Michael, jr., and others.

Analytic experimental physics. Ed.2, revised. 622p. 1956. Univ. of Chicago Press, Chicago, $8.

Proceedings of the Royal Australian Chemical Institute, Sept. 1956, p.239. ¾ p.

"Well produced and the numerous photographs and well-drawn diagrams are again a special feature . . . A good selection of text material has been made including many recent developments. Within the limits to be reasonably expected in a book of this standard it covers a very comprehensive range . . . Numerous worked examples appear throughout . . . and these enhance the value of the book to students. A good feature . . . is the considerable number of interesting and practical problems and queries at the end of each chapter . . . It is to be regretted that answers are not given to the even-numbered quantitative problems . . . A valuable contribution to the teaching of physics and the authors are to be congratulated on their achievement. It is safe to predict that the work will find favour with both teachers and students." *S. L. M.*

Scientific American, Nov. 1956, p.153. ¼ col.

"A revised edition of an immensely successful textbook which covers the whole of classical physics and incorporates enough of the latest concepts to introduce a student to the shape of the science as a whole . . . The revision retains abundant material covering the physical aspects of fundamental phenomena and adds up-to-date information in the discussions of quantum, atomic and nuclear physics, electricity, heat and thermodynamics. There are many satisfactory illustrations, but fewer than in the first edition, and their reproduction is often fuzzy."

Forbes, George F.

Digital differential analyzers; an applications manual for digital and Bush type differential analyzers. Ed.3. 182p. 1956. The Author, Pacoima, Calif., $7.50.

Aeronautical engineering review, Nov. 1956, p.175. 10 l.

"For the mathematician, engineer, or researcher as an aid in the utilization of the equipment and personnel of a DDA or Bush installation. The second edition was published in 1955, and the text is included in the present edition along with additional material. Most of the material deals with the mathematical theory of the problem rather than with specific case runs on the machine."

Formed Steel Tube Institute, Incorporated.

Handbook of welded steel tubing. Revised edition. 267p. 1956. The Institute, 850-52 Hanna Bldg., Cleveland, $20.

Product engineering, Oct. 1956, p.405. ⅛ col.

"Prepared in two parts: carbon steel tubing and stainless steel tubing. Both sections present a wealth of information on manufacturing methods for welded tubing, shapes available, tolerances, mechanical properties, fabrication procedures and applications. A detailed glossary is appended, together with a useful design data section."

Tooling and production, Nov. 1956, p.104. ⅛ col.

"All types of information pertaining to general processes, mechanical properties, fabrication methods and applications for both carbon and stainless tubing are included. A special section contains design data and a glossary of terms for welded steel tubing."

Frazee, Irving A., and others.

Automotive electrical systems. Ed.2, revised. 36p. 1956. American Technical Soc., Chicago, $6.25.

Automotive industries, Oct. 15, 1956, p.130. ⅛ col.

"Revised to include full coverage of 12-volt electrical systems. The editors have included a chapter on electrical theory, which provides an excellent groundwork for the beginner to the chapters that follow . . . Bulk of the book is devoted to trouble shooting procedures for the various circuits and appliances comprising automobile electrical systems. The storage battery, generator, cutouts, and regulators are covered separately and then as components of a complete circuit; the same approach is applied to the starting system, light systems, horns, sirens, instruments and gages."

Gaebler, Oliver H., ed.

Enzymes; units of biological structure and function. 624p. 1956. Academic Press, New York, $12.

Journal of the American Medical Association, Oct. 13, 1956, p.693. ½ col.

"This symposium consists of 27 papers, each of which is by an outstanding authority, and the discussions that followed . . . Purpose . . . was to discuss the progress made in past studies and to point out the areas of promise for future studies in establishing the relationship of enzymes to the more complex aspects of cell physiology . . . Should be of interest to almost any person who does research in or teaches biochemistry, biology, microbiology, biophysics, genetics, physiology, pharmacology, pathology, or nutrition . . . Contains both author and subject indexes."

Science, Nov. 2, 1956, p.896. ⅔ col.

"The organizers of the symposium selected a panel of exceptional competance, so the published papers are authoritative and of highest quality. Some of the papers contain new material not published elsewhere and will be of interest even to specialists. The symposium as a whole covers such a broad field that it should be of great value to both teachers and graduate students in the biological sciences as a guide to current interests and future trends in research on enzymes. There are few biologists whose viewpoint would not be broadened by a careful reading of this volume." *Mark H. Adams.*

Giblin, J. C.

Qualitative and volumetric analysis. Ed.2. 183p. 1955. Longmans, New York, $1.75.

Science progress, Oct. 1956, p.744. 11 l.

"Intended primarily to give students a training in practical chemistry up to University Scholarship standard . . . Differs but little from the first edition . . . The material is clearly set out, obviously by a chemist with considerable experience of teaching in schools." *P. F. Holt.*

Grant, Hiram E.

Practical descriptive geometry. 403p. 1956. McGraw, New York, $5.75.

American machinist, Nov. 5, 1956, p.250, 252. ½ col.

"This Alternate Edition of Practical Descriptive Geometry attempts to correlate and integrate theory and practice instead of considering each a separate entity. The text employs the direct method because the author believes that it is the best way to solve practical problems, where the typical theoretical approach often makes solution difficult."

Product engineering, Nov. 1956, p.378, 380. ½ col.

"The alternate edition is the same as the regular edition, except that 925 problems have been added, made up of 405 theoretical problems and 520 practical problems. Most of the problem material was obtained by personal visits to approximately 300 United States and Canadian industrial firms."

Hardy, H. W.

Planetary gearing. 59p. 1956. Machinery, Brighton, England, 4s. 6d. net. (Yellow back series.)

Mechanical world, Oct. 1956, p.473. ¼ col.

"Practical methods of investigating the speeds and efficiency of planetary gearing are explained . . . with the aid of worked examples. The author uses the equivalent lever and tabular methods and develops them from the simplest arrangement to some complicated trains. Efficiency is treated in relation to the various categories and attention is given also to the frictional power absorbed by bearings. The book concludes with general observations on gears, materials, lubrication and starting torque."

Harler, C. R.

Culture and marketing of tea. Ed.2. 263p. 1956. Oxford Univ. Press, London, 25s.

Food, Oct. 1956, p.400. 1¼ col.

"Completely rewritten . . . The book's scheme is comprehensive, a large amount of information being concisely presented. Part I deals with the tea plant, production, chemistry, and pharmacology; in Part II the tea countries of the world are reviewed; and Part III discusses the customs and ramifications of the tea trade and industry." *Eric Chilman.*

Harvey, Ethel Browne.
American arbacia and other sea urchins. 298p. 1956. Princeton Univ. Press, Princeton, N. J., $6.

Science, Nov. 16, 1956, p.987. ¾ col.

"The first section is a highly entertaining historical sketch of sea urchins through the ages and their natural history. The next is on the egg, the sperm, and development, and the last is on centrifuged eggs—a field which the author has made distinctively her own. The following third of the book consists of tables of work alphabetically arranged under subject headings. The bibliography contains more than 1500 items . . . A masterpiece of thoroughness and organization and will be of great value to the beginner in research and to the veteran investigator." *A. R. Moore.*

Heineman, E. Richard.
Plane trigonometry. Ed.2. 167p. 1956. McGraw, New York, $3.75.

Product engineering, Nov. 1956, p.417. ⅛ col.

"Should prove especially beneficial to readers who have a weak mathematical background. Trigonometric functions and identities are defined and clarified before going on to the discussion of logarithms, the solution of triangles, inverse trigonometric functions and complex numbers. Miscellaneous points include: applied problems; problems that are encountered in calculus; the concept of infinity; memory schemes; and the uses of sine and cosine curves."

Scientific monthly, Nov. 1956, p.263. ⅝ col.

"Principal changes in the new second edition . . . are in the problem lists. The preface indicates that completely new problem lists appear in this edition, and that the number of stated problems has been increased appreciably. These changes should make this textbook more useful to the teacher and student. Both editions of this book can be recommended for teachability, particularly for students with a weak mathematical background . . . Can be appropriately used for trigonometry courses in high school." *John R. Mayor.*

Hershenson, H. M.
Ultraviolet and visible absorption spectra; index for 1930-1954. 205p. 1956. Academic Press, New York, $10.

Journal of the Optical Society of America, Nov. 1956, p.1002. ⅔ col.

"A compound index to absorption spectra references for a 25 year period in which compounds are usually listed in accordance with the Chemical Abstracts nomenclature, and references give journal, volume, page, and year. About 32 000 references are included in this index which covers 27 journals from 1930 to 1954. This book will obviously be used as a reference work in which the worker will expect to consult for references to compounds or groups of compounds, with the references down in his notebook and then proceed to the library to complete his literature search by reference to the actual articles . . . This reference work will be found most useful to those who wish to study the visual or ultraviolet absorption spectra of organic compounds." *Wallace R. Brode.*

Hine, Gerald J., & **Brownell,** G. L., ed.
Radiation dosimetry. 932p. 1956. Academic Press, New York, $22.

Review of scientific instruments, Oct. 1956, p.869. 1½ col.

"The book as a whole is largely directed toward applications to problems in experimental medicine and biology. (Industrial and technical applications are not overlooked, but usually are simpler.) . . . The field of radiation dosimetry is changing rapidly and it is inevitable that parts of a book of this type will soon be obsolete. For the moment, however, it is the only book available on the field as a whole. It is a pleasure to recommend it to anyone interested in the quantitative aspects of the effects of radiation." *James S. Robertson.*

Science, Nov. 2, 1956, p.896. 1⅗ col.

"This comprehensive work . . . will be welcomed, not only by practicing radiologists, but also by the host of investigators concerned with radiation effects in nonliving structures such as plastics and metals exposed to the dense flux of radiation produced by nuclear reactors. The present volume . . . is a result of the collaborative efforts of 22 contributors who are well known in their respective fields of specialization . . . Organized into three main sections dealing with the fundamental principles of dosimetry, radiation detectors, and the dosimetry of radiation fields." *Herman Yagoda.*

Hoare, W. E., comp.
Tinplate handbook. Ed.3, revised and enlarged. 44p. Tin Research Inst., Fraser Rd., Perivale, Greenford, Middlesex, England, gratis.

Chemical trade journal and chemical engineer, Nov. 2, 1956, p.1036. ⅔ col.

"Figures for world tinplate production are given up to the end of 1955 . . . Among other contents of this useful guide for tinplate buyers and users is an extensive glossary in English, French, German and Spanish of over 100 terms in current use in the industry."

Horsfall, James G.
Principles of fungicidal action. 279p. 1956. Chronica Botanica, Waltham, Mass., & Hafner Pub. Co., New York, $6.50. (New series of plant science books, v.30.)

Soil science, Oct. 1956, p.348. ⅓ p.

"The first chapter takes the reader back to 1000 B.C., when Homer spoke of 'the pest-averting sulfur.' The remaining chapters deal with fungicidal and protective actions and their measurement, mobilization of residual protectant, permeation, disruption of cellular organization, effects on growth and metabolism, and action of metals, elemental and organic sulfur, quinones, and heterocyclic compounds. Two other chapters of special interest are concerned with the principles of chelation of needed metals and with chemotherapy. The book is not only unique in its concept but the sparkling personality of the author is clearly

revealed. Its contents are dependably informative, up to date, and highly interesting as well."

Houghton, P. S.

Jig and fixture design. 256p. 1956. Chapman & H., London, 36s. net.

Engineer, Oct. 26, 1956, p.583. ⅔ col.

"Aim . . . has obviously been to present students and others concerned with jig and future design with the essential principles and requirements, together with a selection of examples, which will provide a useful basis and guide in their work . . . Both instructors and students will find a series of questions and problems based on the information given in the various sections of interest and value . . . Provides a useful companion to the other well-known works by the same author on press tool practice."

Mechanical world, Nov. 1956, p.523. ⅔ col.

"Jigs and fixtures are so well established in engineering manufacturing practice that one looks for special qualifications in any new book on the subject. They are present here in the variety of the author's experience, from mechanic to draughtsman, and works manager . . . Will be useful in technical colleges having courses on production engineering particularly as it provides sets of questions on the subject matter of each chapter."

Model engineer, Sept. 27, 1956, p.444. ⅓ col.

"Although the devices described in this book apply mainly to industrial quantity production, their design, and the ingenuity which has been devoted to it, are of interest to all engineers . . . The book begins by explaining the need for jigs and fixtures, the economics of production, and the principles employed in clamping, locating and ensuring uniformity of components in machining operations. Jigs for drilling, indexing, turning, boring, milling, broaching and grinding are described, followed by chapters on power clamping, air-operated equipment, dimensional standards, and motion study. The final chapter presents questions and problems on design and application."

Houk, Ivan E.

Irrigation engineering. v.2. 531p. 1956. Wiley, New York, $14.

Agricultural engineering, Oct. 1956, p.714. ⅓ col.

"Information . . . has been drawn from federal irrigation projects, officials in the Bureau of Reclamation, journal articles, and the author's own experience . . . Reports engineering information on all aspects of irrigation projects, conduits, and dams. Emphasis is on the practical requirements for evaluating irrigation feasibilities and in planning and constructing irrigation projects. Along with Volume I . . . the book gives a picture of modern irrigation engineering."

Ihne, Russel, & **Streeter,** W. E.

Machines trades blueprint reading. Revised edition. 169p. 1956. American Technical Soc., Chicago, $2.95.

American metal market, Sept. 28, 1956, p.2. ½ col.

"This book has received an exceptionally wide audience because it places special emphasis on visualization . . . This is believed to be one of the first books of its kind stressing this problem of visualization . . . The present revision was undertaken in order to take full advantage of insights gained into the teaching of blueprint reading since 1941. Careful analysis of the many reports by teachers and students who have found the book useful have led to a number of important new ideas for the revised edition."

Automotive industries, Oct. 15, 1956, p.130. ⅛ col.

"In their new approach, the authors emphasize the difference between the draftsman, whose basic function is to represent an object, and the machine tradesman, whose job it is to produce the object on the basis of information contained in the blueprint. To meet the needs of the latter, the authors have devised a step-by-step method of guiding the student in visualizing an object from a blueprint."

International symposium on macromolecular chemistry, 1954. 954p. 1955. Interscience Publishers, New York, $19.20.

British plastics, Oct. 1956, p.389. ½ col.

"The papers published are all of a theoretical nature and the range of subjects covered are building reactions of macromolecules, transformation reactions of macromolecules, block polymers and graft polymers, cellulose and derivatives, molecular weight distribution, methods for determining molecular weight, branched polymers, fibre-forming high polymers, crystallization and transition, proteins, and general properties of polymers . . . Papers presented do represent the 1954 views on the particular subjects, so this volume would appear to be essential in a high polymer reference library.'" *C. A. Redfarn.*

Plastics, Oct. 1956, p.291. ⅓ col.

"The published papers of the 1954 symposium in Milan offer some fascinating reading, in parts. Of special importance is the paper by Dr. Giulo Natta on the kinetics of polymerization of ethylene catalyzed by alkyl-aluminium compounds. Drs. Ziegler and Natta have opened entirely new fields of development both from the viewpoint of manufacture and application, and any published information on the polymerization of ethylene and styrene at low pressures will be read with great interest. One aspect of this book calls for attention; it is exceedingly well produced, with summaries in German, Italian and English. One might almost describe it as a model example of how to publish a set of symposium papers."

Science progress, Oct. 1956, p.747. ½ p.

"It was a happy idea of Prof. Nasini, Natta and Milone to have the communications to the International Symposium on Macromolecular Chemistry, held in Milan and Turin in the autumn of 1954, all collected together and published in one volume. This book contains papers from all parts of the world and covers many aspects of macromolecular chemistry . . . To workers in this field this collection of papers will be especially valuable not only as an account of the actual scientific content but also in drawing attention to the various methods of approach to a common subject by investigators in different parts of the world . . . Well presented and singularly free from errors. Whilst the various curves are clearly and legibly depicted, the few photographs included scarcely do justice to an otherwise valuable and useful collection of papers." *Eric K. Rideal.*

Jay, Kenneth.

Calder Hall; the story of Britain's first atomic power station. 88p. 1956. Methuen, London, 5s.

Chemical age, Oct. 27, 1956, p.179. ⅝ col.

"Tells in straightforward terms the history of the design and building of Calder Hall, the first atomic power station to operate on an industrial scale. Although intended for the layman (and this does not necessarily mean the non-scientist), the background information contained here will be of interest to many directly concerned with atomic energy." *J. P. S. J.*

Engineer, Oct. 26, 1956, p.583. ⅞ col.

"A delightfully lucid account, written in simple, non-technical language, which should be readily intelligible to the layman. To the technical reader it should also be useful as an introduction to the much more detailed studies which are to be found, for example, in the proceedings of the British Nuclear Energy Conference . . . It is a pity that there is no index, for a book such as this, short though it is, deserves one."

Kaiser Aluminum & Chemical Corporation.

Casting Kaiser aluminum. 388p. Technical Editor, Kaiser Aluminum & Chemical Sales, Inc., 919 N. Michigan Ave., Chicago, $5.

Light metal age, Oct. 1956, p.43. ⅓ col.

"Extensive information on all phases of aluminum casting has been carefully correlated into a single volume. Progressive foundry practices are fully treated with a complete analysis of aluminum casting alloys and their characteristics. While this new publication is designed primarily for foundrymen interested in using aluminum, its scope extends to any metal fabricator seeking comparative information about the possible application of aluminum castings to his product. Copies may be obtained free when requested on company letterhead."

Kaplan, Wilfred, ed.

Lectures on functions of a complex variable. 435p. 1955. Univ. of Michigan Press, Ann Arbor, Mich., $10.

Science progress, Oct. 1956, p.712. ⅔ p.

"An incomplete 'proceedings' (several papers are being published separately) of a conference at the University of Michigan . . . Beautifully produced but the reviewer noticed occasional slips." *M. E. Noble.*

Key, Arthur.

Gas works effluents and ammonia. Ed.2, revised by P. C. Gardiner. 197p. 1956. Institution of Gas Engineers, London, 21s.

Coke and gas, Oct. 1956, p.402. 1¼ col.

"The book has quite rightly a bias towards the practical side of the work of the gas chemist. The general arrangement of Dr. Key's original book has been largely retained. Where new knowledge enables more positive statements to be made or new sections to be added this has been done . . . Thoroughly recommended for addition to the shelves of the practical gas engineer and chemist and as a text-book for the students of gas manufacture."

Royal Society of Health journal, Oct. 1956, p.660. 9 l.

"The previous edition of this book . . . contained . . . a review of knowledge concerning the problems of the recovery and utilization of gas works ammonia and the disposal of gas works effluents. This second edition includes much of the fundamental material contained in the earlier work. It has, however, been brought up to date and considerably enlarged, and an attempt has been made to give a broader overall picture of the problems from the practical aspect."

Kubaschewski, O., & **Catterall,** J. A.

Thermochemical data of alloys. 200p. 1956. Pergamon, London, 45s. (Metal physics and physical metallurgy series, no.3.)

Journal of the Iron and Steel Institute, Oct. 1956, p.247. ⅔ col.

"Kubaschewski and Catterall have, by an exhaustive review of the literature, been able to give at least some relevant thermodynamic data on over two hundred binary and some forty ternary metallic systems . . . Information is given on over thirty systems involving iron, and thermodynamic data obtained from studies of systems of the transition elements with the non-metallic elements oxygen, carbon, nitrogen, sulphur, and phosphorus form a large part of the book . . . Throughout . . . the authors have made an excellent job of critically appraising the various, frequently conflicting, results of different workers, and Dr. Kubaschewski's lifelong devotion to this subject is apparent in the expert manner in which the assessment of the experimental results have been carried out." *A. D. McQuillan.*

Lapp, Ralph E.

Atoms and people. 304p. 1956. Harper, New York, $4.

Science, Nov. 2, 1956, p.895. 1 col. including another review.

"Provides the vivid reading of a novel and . . . difficult to lay down as a novel would be. Step by step, Lapp traces the story of the development of the theory of the chain reaction, the first pile, the first bomb, and finally the complete family of nuclear weapons." *Laurence H. Snyder.*

Leggett, Robert.

Rideau waterway. 249p. 1956. Univ. of Toronto Press, Toronto, $5.

Engineering news-record, Oct. 11, 1956, p.105. ⅞ col.

"One of the little-known artificial waterways of this continent is the Rideau Canal in Canada . . . Built during the period 1826-1832, this canal provided the final link in a navigable channel from Montreal to the Great Lakes . . . For engineers, chief interest in this book will be found in its detailed account of the construction of the canal, its dams and locks . . . Vast amount of research . . . must have gone into the preparation of the book."

Levitt, J.

Hardiness of plants. 278p. 1956. Academic Press, New York, $7.

Soil science, Oct. 1956, p.346. ⅜ p.

"Sixth member of the series of monographs that have been prepared under the auspices of

the American Society of Agronomy . . . Deals with the capacities of plants to survive low temperatures, low moisture supplies, and high temperatures. Excesses and deficiencies of other environmental factors are not considered . . . A highly interesting and well-developed presentation of the subject. A list of nearly a thousand references is appended."

Ling, E. R.

Textbook of dairy chemistry. Ed.3, revised. v.1: Theoretical. 227p. 1956. Chapman & H., London, 21s. net.

Chemistry & industry, Oct. 27, 1956, p.1220. ½ col.

"Considerably rewritten . . . Deals only with the theoretical aspects of the constituents and composition of milk, milk acidity, the effects of heat on milk and the action of milk on metals, cream, butter, cheese, soft curd milk, condensed and dried milks, and dairy by-products . . . Text is clearly and well presented throughout and many references are given to the original literature . . . As in the case of previous editions this volume can be recommended as a necessary book on the shelf of all dairy chemists, whether they be students, or engaged in research, control or advisory laboratories." *A. W. Marsden.*

Loop, James W.

Beginning course in printing. Revised edition. Inland Printer, Bk. Dept., Chicago, $3.35.

Inland printer, Oct. 1956, p.76. ⅛ col.

"Written in the form of a dialogue between an instructor and pupil in simple language that explains in detail what must be done and why. The first part . . . covers the work done in the composing room. Then the pupil is gradually introduced to the pressroom where he prints on a platen press type he has set. There are lectures on typesetting machines, stereotyping, offset presswork, newspaper work, and information on Fotosetter and other machines."

McBurney, C. B. M., & **Hey,** R. W.

Prehistory and Pleistocene geology in Cyrenaican Libya. 315p. 1955. Cambridge Univ. Press, London.

Journal of geology, Nov. 1956, p.628. 2⅔ col.

"This book is a step toward filling an important gap in knowledge in Cyrenaican Libya . . . Primarily concerned with the limestone plateau area of the Gebel Akhdar, some 200 by 100 miles in extent and about 800 miles east of the Atlas range, a region better watered than the inland sand sea or the coast to east and west . . . The geological studies of Hey will be of particular interest to readers of this *Journal.* He provides a thorough description of the continental and marine deposits of the area and a cautious, thoughtful interpretation of their possible correlation with those of adjoining regions of the Mediterranean . . . Well-written and excellently illustrated report . . . A fine contribution toward a better understanding of Pleistocene events and human history in the eastern Mediterranean." *F. Clark Howell.*

McLachlan, N. W.

Ordinary non-linear differential equations in engineering and physical sciences. Ed.2. 271p. 1956. Oxford, New York, $6.30.

Aeronautical engineering review, Nov. 1956, p.180. ⅛ col.

"Gives a practical introduction to nonlinear differential equations for engineers, physicists, and students . . . Additions include: (1) derivation of nonlinear differential equations satisfied by Jacobian elliptic functions; (2) a new version of the stability problems of the synchronous motor; (3) a chapter on singular points of differential equations, stability criteria, their derivation and application; (4) four theorems on the types of solution of certain nonlinear differential equations; (5) a chapter on fluid flow in two dimensions; and (6) 52 problems with answers."

MacLanachan, W., ed.

Television and radar encyclopædia. Ed.2. 216p. 1956. Newnes, London, 30s.

Electronic engineering, Oct. 1956, p.459. ⅛ col.

"Contains informative articles contributed by leading authorities in their respective fields, and will be of interest both to the qualified technician and to the non-specialist reader. Many new definitions have been included and others have been revised in the light of latest practice. Developments such as automatic picture control, compatible colour television systems, flywheel synchronization, thermistors and transistors are included."

Magill, Paul L., and others, ed.

Air pollution handbook. 720p. 1956. McGraw, New York, $15.

Factory management and maintenance, Oct. 1956, p.296. ⅓ col.

"The causes, effects, and control of air pollution are all discussed in this book on a worrisome subject. While it contains a great deal of theoretical information, of most interest to plant operating men will be pertinent facts needed to determine the nature, extent and effect of air pollution at their plant, and how best to carry out an effective program of abatement."

Mandl, Matthew.

Television servicing. Revised edition. 460p. 1956. Macmillan, New York, $6.50.

Technician & circuit digests, Oct. 1956, p.20. ¼ col.

"Expanded to cover transistors, color TV and series filament circuits which were not included in the first edition . . . The same text organization has been retained . . . A 12-page section cross-references symptoms with pertinent chapters, such as sound, video, sync, vertical, horizontal, power supply, antenna, etc. Three chapters are devoted to test equipment. This most informative reference book offers 314 illustrations to complement a clearly written text."

Mark, David.

Basics of phototubes and photocells. 136p. John F. Rider, New York, $2.90 unbound.

Popular electronics, Nov. 1956, p.34. ⅔ col.

"Topics covered include the photoelectric effect, photoconductive cells, photovoltaic cells,

phototubes, photocurrent amplifiers, instrument applications, commercial applications. A conscientious bibliography is provided for further study. Numerous photographs and diagrams and a complete index add to the book's usefulness. *Recommended*: to students and technicians interested in photoelectricity."

Technician & circuit digests, Oct. 1956, p.20. 12 l.

"This welcome book tells the whole story of . . . versatile photosensitive units, how they work and where they are used—from automatic industrial colorimeters to military sniperscopes. Clearly explained and well illustrated, this volume is to be highly recommended."

Marshall, Joseph.

Maintaining hi-fi equipment. 223p. 1956. Gernsback, New York, $5.

Radio-electronics, Nov. 1956, p.154. ⅔ col.

"Hi-fi equipment requires specialized and more exacting maintenance than does ordinary audio equipment. That is the reason for this book, written by an authority in the field. This text can aid the hi-fi owner who wishes to do his own servicing as well as the professional technician . . . Written in easily understood language and includes many diagrams and scope test patterns." *I. Q.*

Maynard, Harold B., ed.

Industrial engineering handbook. 1504p. 1956. McGraw, New York, $17.50.

Plating, Oct. 1956, p.1232. ⅔ col.

"Scores of experts . . . have each contributed a measure of their experience on such diverse topics as the industrial engineering function, work measurement, predetermined elemental time standards, wage payments, plant facilities and design, and control procedures . . . Not only a reference and guide for the practicing industrial engineer, but also valuable for the manager of a business, helping him to organize, guide, and direct the industrial engineering function most effectively."

Tooling and production, Nov. 1956, p.106. ¼ col.

"A broad, authoritative treatment of the wide field of industrial engineering is contained in this handbook of principles, data, methods and procedures . . . Factual in approach, the book covers many practices . . . Procedures used directly by the industrial engineer, and related ones such as quality control and tool and gage design, are covered."

Mirsky, L.

Introduction to linear algebra. 433p. 1955. Oxford Univ. Press, London, 35s.

Philosophical magazine, July 1956, p.690. ⅛ p.

"A rather satisfactory book, covering approximately the ground normally covered in an undergraduate course on Linear Algebra . . . The reader will not find . . . any treatment of compound matrices nor of dual vector spaces nor of the classical canonical form for a class of similar matrices; there are however some agreeable sections on inequalities and on groups of linear transformations . . . Pleasantly written and printed, and is perhaps the most suitable book on the subject now available for undergraduates." *S. W.*

Mobley, Mayor D., & **Hoskins**, R. N.

Forestry in the South. 448p. 1956. Turner E. Smith & Co., Atlanta, Ga., $3.95.

American forests, Oct. 1956, p.92. ⅛ col. including another review.

"A text prepared for students approximating upper high school age . . . Content is designed to fit well into the methods used by teachers of vocational agriculture and the relationship of forestry and agriculture is emphasized throughout. The book could, however, serve well as a reference on forestry in the South and for the general reader seeking information on that subject . . . Extensively illustrated." *Arthur B. Meyer.*

Mooney, Harold M., & **Wetzel**, W. W.

The potentials about a point electrode and apparent resistivity curves for a two-, three- and four-layer earth. 146p. 1956. Univ. of Minnesota Press, Minneapolis, $4.50.

Mining engineering, Nov. 1956, p.1060. ⅛ col.

"This work, of special interest to geophysicists, is presented in two parts. A 146 page bound volume sets forth all the tabular material with an introduction to its use and the mathematical basis for both tables and curves. The second section is an envelope containing apparent resistivity curves for about 2300 two-, three-, and four-layer horizontal structures."

Murdock, L. J.

Concrete materials and practice. Ed.2. 355p. 1956. St. Martins, New York, $8.50.

Public works, Oct. 1956, p.192. ⅛ col.

"Second edition of a book by an English author . . . It refers especially to the use of cements and aggregates and includes admixtures, water-cement ratios, design of mixes, proportioning, mixing and transporting, placement, compaction, curing, cold-weather concreting, finishing, formwork and quality control, inspection and testing. Lightweight concretes and floor finishes are well covered."

Nachod, Frederick C., & **Schubert**, Jack, ed.

Ion exchange technology. 660p. 1956. Academic Press, New York, $15.

Chemical engineering, Oct. 1956, p.396. 1 col.

"Although several of the text's statements are speculative, they are challenging to chemists and chemical engineers. And this volume, with its treasure of information, should prove an invaluable tool to all persons concerned with ion exchange problems." *M. Mendelsohn.*

Industrial and engineering chemistry, Oct. 1956, p.83A. 2 col.

"Partaking of the nature of both a monograph and an encyclopedia on ion exchange technology, the book contains considerable repetitious material, some of which could have been dispensed with to advantage. More than compensating for these minor objections the fact that almost all the individual contributions avoided the pitfall of becoming mere literature surveys . . . The reviewer believes that the volume . . . is a unique and valuable addition to the published work on ion exchange science and technology, meeting a long standing need for a ready reference on the more practical aspects of the subject." *A. G. Winger.*

Soil science, Oct. 1956, p.347. ⅓ p.

"Thirty-two specialists in ion-exchange technology, most of whom are professional engineers or chemists, participated in the writing of the 20 chapters . . . The authors deal with the fundamental aspects of cation and anion exchange and applications to water treatment, catalysis, metallurgy, radiochemistry, and organic chemical purifications. The radiochemistry involves processing radioisotopes and treatment of radioactive wastes. The organic chemical processes include the refining of sugar, antibiotics, and similar products. No one man could have written such an exhaustive treatise on this highly important subject."

Neely, Henry M.

Stars by clock and fist. 192p. 1956. Viking, New York, $4.

Sky and telescope, Nov. 1956, p.27. 1⅔ col.

"What I like about this latest book on constellation study is the author's use of standard navigational and astronomical terms while writing so simply that everyone who reads can understand him . . . [Mr. Neely's] star maps have some drawbacks, but in conjunction with the finding lists the maps tell a person almost without fail what he is looking at up in the sky. There are only 18 pages of actual instructions to study, in large easy-to-read type, lucidly written." *C. A. F.*

Newman, James R.

World of mathematics. 4v. 2535p. 1956. Simon, New York, $20.

Aero digest, Nov. 1956, p.10. ¼ col.

"With the publication of these four volumes, a lavish selection of writings by the world's greatest mathematicians is, for the first time, available as a unified library for layman and expert. One-hundred-thirty-three books, essays, stories and mathematical diversions are included."

Technician & circuit digests, Oct. 1956, p.18. 11 l.

"These absorbing volumes are perhaps the best on the subject published to date. Here are some of the topics discussed: Mathematics and Logic; Laws of Chance; Can Machines Think?; Mathematics in Warfare; and many others."

Newman, Melvin S., ed.

Steric effects in organic chemistry. 710p. 1956. Wiley, New York, $12.50.

Modern plastics, Nov. 1956, p.200. ⅔ col.

"The thirteen chapters . . . have been written by ten professors and two researchers, representing 11 widely separated institutions, and may be expected, therefore, to be a representative sampling of current thinking on the subject . . . Each chapter is preceded by an outline of its contents, and each has its own list of references (about 1500 in all). To many workers the long final chapter on the separation of polar, steric, and resonance effects in reactivity will be especially interesting."

Nodelman, Henry M., & **Smith,** F. W.

Mathematics for electronics with applications. 391p. 1956. McGraw, New York, $7.

Product engineering, Nov. 1956, p.429, 432. ⅓ col.

"The presentation is different from other available texts because of extensive correlation between mathematical theory, which has generally been treated from a classical point of view, and the practical application. Recent advances covered in the electronics field include transistors, the matrix method of network analysis and dimensional analysis of electronic problems, including a discussion of the mks system of units. Up-to-date exercise problems based on actual current industrial engineering practice are included."

North Atlantic Treaty Organization—Advisory group for aeronautical research and development.

Selected combustion problems, II: Transport phenomena, ignition, altitude behaviour and scaling of aero engines. 1956. Butterworth & Co., (Publishers), Ltd., 88 Kingsway, London, W.C.2, 90s.

Engineer, Oct. 26, 1956, p.583. 1 col.

"It can be stated at once that although the papers deal exclusively with aeronautical problems they will be found useful to a much wider range of industry. There is a refreshing absence of jargon and, in some of the papers, at any rate, a down-to-earth practical approach which enables the ordinary engineer both to follow the line of argument without difficulty and to see how far it applies to his own particular problem."

Parker, Stanley.

Drawings and dimensions. 306p. 1956. Pitman, London, 35s. net.

Engineering, Oct. 26, 1956, p.524. 1⅛ col.

"Although much of the matter is of an elementary nature it could not well have been omitted, and to cover the whole of dimensioning would hardly have been possible. Within its field—the dimensioning of engineering drawings so that the product can be readily produced, and checked and measured in the most effective way—the book can be thoroughly recommended, both on its own account and as a useful supplement to British Standard No. 308."

Mechanical world, Nov. 1956, p.522. ⅔ col.

"Mr. Parker's work on the establishment of a standard and logical language for the expression of dimensions and tolerances on engineering drawings was so important during the war that it won for him the British Empire Medal . . . It is embodied in British Standard 308 and the present book amplifies the recommendations given there and explains the necessities for the principles set up to avoid the hindrances which too often confuse the work of designers, production engineers and inspectors."

Petterssen, Sverre.

Weather analysis and forecasting. Ed.2. 2v. 1956. McGraw, New York.

v.1. Motion and motion systems. 428p. $8.50.

v.2. Weather and weather systems. 266p. $6.

Aeronautical engineering review, Oct. 1956, p.172. ⅓ col.

"A general and thorough text on forecasting which aims at minimizing the difference between

synoptic and dynamic meteorology . . . Will be of value to professional meteorologists as well as to university students . . . Volume I emphasizes the dynamics of atmospheric processes. In it are treated the dynamics of motion systems—cyclones, anticyclones, fronts, and upper waves . . . Volume 2 deals with weather. The emphasis is on the thermodynamics of atmospheric processes."

Journal of applied physics, Oct. 1956, p.1256. (Review of v.1 only.) 8 l.

"Emphasis in this volume is on the dynamics of atmospheric processes . . . Treatment is carried from basic hydrodynamics, through the various methods of analysis (including graphical methods and numerical integration by electronic computers), to techniques for forecasting the development and movement of pressure systems."

Science, Oct. 19, 1956, p.728. 1⅔ col.

"The second edition of Petterssen's well-known textbook is really an entirely new book . . . Revisions have been so extensive that almost nothing remains of the original edition. The orientation, material, illustrations, and organization, as well as basic concepts, have been completely altered and modernized . . . A few errors are found in the book . . . The author deserves high praise for accomplishing the formidable task of bringing synoptic meteorology up to date." *Jerome Spar.*

Philco Corporation.

Handbook of tubes and semiconductors. 207p. The Corporation, 18th & Courtland St., Philadelphia, $2.

Product engineering, Nov. 1956, p.439. ¼ col.

"Composed of six sections, one of which is devoted to servicing and maintenance aids, and service hints which are normally acquired only with experience. Characteristics and connections of about 2000 tubes and semiconductors are included . . . Tube information includes data on receiving, transmitting, and a variety of special-purpose tubes such as cathode-ray, klystron, magnetron, TR, ATR, hydrogen thyratron, voltage regulator, and voltage reference tubes."

Phillips, F. C.

Introduction to crystallography. Ed.2. 324p. 1956. Longmans, New York, $6.

Chemical age, Oct. 6, 1956, p.34. ½ col.

"No better introduction to crystallography exists for the mineralogist, chemist or physicist, whether the subject is to be studied deeply or as a small section of some wider field. The new edition is larger than the old, because it contains a chapter on the Diffraction of X-rays by Crystals. The treatment is elementary and does no more than hint at the many methods that are now available for detailed crystal structure analysis . . . Apart from this new chapter there are only a few changes. In particular the nomenclature has been slightly modified to bring it into accord with that now standardised in the international tables for X-ray crystallography, and a few of the very numerous figures have been improved." *Kathleen Lonsdale.*

Industrial diamond review, Sept. 1956, p.B245. 10 l.

"The second edition . . . makes no fundamental changes. There is a single new chapter on the 'Diffraction of x-rays by crystals' which does not, however, deal with practical work. Additionally, the chapter of 'Space groups' has been modified and there have been some minor emendations in the text and in a few illustrations."

Pollard, L. Belle.

Experience with foods. 528p. 1956. Ginn, Boston, $4.32.

Journal of home economics, Nov. 1956, p.734. ½ col.

"Presents a well-integrated, family centered approach to the first course in meal planning, preparation, and service for high school students . . . Attractive in format and appealing in presentation . . . Generously illustrated with colored as well as black-and-white pictures, clever drawings, and informative charts . . . Directed to high school students with careful consideration for their present needs, interests, and responsibilities in family and social relationships. Since the emphasis throughout the book is placed upon basic principles and techniques of meal planning, food preparation, and home management, it will be readily adaptable to a wide variety of homemaking programs." *Irene Hughes.*

Potter, Morgan H.

Oxy-acetylene welding. Ed.4, revised and enlarged. 140p. 1956. Technical Press, London, 21s. net.

Shipbuilder and marine engine-builder, Oct. 1956, p.636. ¼ col.

"This text-book has been used for many years as a standard for reference by men of wide experience, as well as by apprentices . . . The work is distinctly practical in its outlook and treatment, and the numerous illustrations clarify the various processes described . . . Bulk of the text is devoted to the techniques of welding steel, cast-iron, malleable iron, bronze, copper, aluminium and white-metal, together with such processes as silver soldering, hard-surfacing, cutting and lead burning. A special feature . . . is the attention given to safe working and fire precaution."

Quick, Lelande, ed. & comp.

Rockhound buyers guide; an encyclopedia for the rock hobbyist. Ed.4. 200p. Lapidary Journal, Del Mar, Calif., $2.

Rocks and minerals, Sept.-Oct. 1956, p.511. ⅔ col.

"This guide contains so many features of intense interest to rockhounds, that we recommend it highly to all our readers . . . If you are a rockhound, you need this Guide; if you do not need this Guide, you are not a rockhound."

Raff, R. A. V., & **Allison,** J. B.

Polyethylene. 551p. 1956. Interscience Publishers, New York, $16. (High polymers, v.9.)

Chemical engineering, Nov. 1956, p.418. 1¼ col.

"Adequate treatment of more recent developments—particularly the new low-temperature and low-pressure process—is lacking in this volume. But this is understandable. These new techniques are just beginning to operate here and abroad. Despite this inadequacy, the book is a fine contribution to high polymer

literature . . . Should prove a valuable aid, background text and reference for polyethylene producers, fabricators and everyone working in the field." *R. K. G.*

Modern plastics, Nov. 1956, p.200. ⅔ col.

"Eight of its ten chapters cover the history, polymerization, structure, modification, properties, processing, uses, and testing of polyethylenes, and there is a chapter on ethylene and an interesting statistical summary of production, since 1938, of principal engineering materials . . . Almost entirely restricted to polymers of ethylene, with little more than a few mentions of saturated hydrocarbon polymers obtained from other monomers."

SPE journal, Oct. 1956, p.54. ⅔ col.

"Well-timed and will be welcomed by many as providing the most complete and authoritative account of polyethylene to be found in a single volume . . . 'Polyethylene' is well-written and does a good job of covering the pertinent literature, especially the patent literature." *Jesse H. Day.*

Reck, Dickson, ed.

National standards in a modern economy. 372p. 1956. Harper, New York, $5.

Factory management and maintenance, Nov. 1956, p.320. ⅓ col.

"A review of the evolution of standards and an evaluation of their crucial place in the world today. Covers the legal aspects of the use of standards, their relation to industrial self-government . . . their impact upon individual enterprise and the economy as a whole. Each of the 33 chapters is written by an expert in that phase of the standards field."

Reichenbach, Hans.

The direction of time; edited by Maria Reichenbach. 280p. 1956. Univ. of California Press, Berkeley, Calif., $5.50.

American scientist, Oct. 1956, p.294A, 296A, 298A, 300A. 3¼ col.

"Since *The Direction of Time* provides a mainly self-contained and very lucid exposition of the physical principles on which the author rests his highly illuminating interpretations, this searching work can be heartily recommended to everyone who wishes to see both philosophical analysis and fundamental physical theory brought to bear on the solution of the pervasive problem of time." *Adolph Grünbaum.*

Physics today, Oct. 1956, p.24, 26, 28. 1⅞ col.

"For a generation Professor Reichenbach has worked as almost no other man to bring to the interpretation of modern physics the critical and reflective thinking of a trained philosopher. Most physicists who retain an interest in philosophy, and many who wanted simply to understand physics, have read some of the earlier books of Reichenbach. This one is for me the best by a good deal . . . Here . . . [the author's] somewhat too cold and careful positivism has been at least transformed into the fruitful opportunism in philosophy so dear to theoretical physicists. The book's argument is too many-sided to summarize." *P. Morrison.*

Reichenbach, Maria. See **Reichenbach,** Hans.

Rodd, E. H., ed.

Chemistry of carbon compounds. v.3, pt.B. 1670p. 1956. Cleaver-Hume, London.

Chemical age, Nov. 3, 1956, p.219. ⅔ col.

"Although Part A of this volume was devoted entirely to benzene derivatives containing a single aromatic ring, certain groups falling within this broad class had to be omitted. Five of the chapters in Part B complete the description of these groups . . . Attention is then turned to the various classes incorporating two or more benzene rings . . . An essential reference book for every chemical laboratory. Compiled by a renowned team of experts, it contains a wealth of useful information and stimulating ideas . . . The vast majority of chemists are already well aware of the outstanding contribution which this series is making in their subject; to those who have not had the opportunity of studying earlier volumes, this book is strongly recommended." *E. J. B.*

Rolt, F. H.

Use of light waves for controlling the accuracy of block gauges. 37p. Hilger, London, 6d.

Instrument practice, Oct. 1956, p.909. 10 l.

"Opens with a consideration of monochromatic light, and the production of interference fringes by two slightly inclined surfaces. The N.P.L. interferometer for flatness testing is then discussed. Tests for surface finish follow and the micro-interferometer is described. The N.P.L. gauge interferometer is examined in detail together with the hilger double ended gauge interferometer. Descriptions of the Koester and Zeiss pattern interferometers conclude the book."

Rose, H. E., & **Wood,** A. J.

Introduction to electrostatic precipitation in theory and practice. 166p. 1956. Constable, London, 17s. 6d.

Engineer, Oct. 19, 1956, p.550. ⅔ col.

"By collecting together from widely scattered sources the available information the authors have achieved a useful presentation of existing techniques. The introductory chapter discusses the ability of electrostatic plant to deal with vast volumes of gas and to extract efficiently microscopic organisms . . . After developing the electrical theory, the authors turn to precipitation efficiency . . . This leads to a discussion of what materials can be extracted . . . The design and construction of a precipitator and the rapping gear needed to free the electrodes of dust are outlined, together with the electrical supply. There is no bibliography, references being given at the end of each chapter; names . . . and subjects are separately indexed, not without errors."

Ross, Frank, jr.

Space ships and space travel. 166p. 1956. Museum Press, London, 12s. 6d.

Journal of the Royal Aeronautical Society, Oct. 1956, p.689. 1 col. including another review.

"Mr. Ross's book at least has the merit of being well-produced and well-illustrated. It is also very comprehensive, although quite short, for it covers the history of rocketry, the exploration of the upper atmosphere by rockets, planetary astronomy, and most current ideas on space flight and various possible types

of space ship. In fact, an intelligent teenager (or other lay reader) would admittedly gain quite a fair impression of the subject from reading just this single book, and moreover without being exposed to too much inaccuracy." *A. V. Cleaver.*

Schubert, Jack. See **Nachod,** Frederick C., & **Schubert,** Jack, ed.

Schultze, R. S., ed.

Science and applications of photography. 644p. 1955. Royal Photographic Society, London, 63s.

Philosophical magazine, July 1956, p.689. ⅜ p.

"A detailed account of the organization and of the proceedings of the International Conference which was held in London in September, 1953 . . . Apart from the Presidential Addresses in the five sections and three of the public lectures, which are of general interest, the 150 papers which appear in the volume are in the form of abstracts of not more than 2000 words . . . Full versions of all the papers which have not appeared elsewhere are available from the library of the Royal Photographic Society . . . Will serve as an invaluable guide to fields of current interest in the science and applications of photography . . . There are few involved in any aspects of photographic processes and of photographic methods of recording and reproducing information who will not find stimulating material within its pages." *J. W. M.*

Schure, Alexander, ed.

Inverse feedback. 47p. 1956. John F. Rider, New York, 90c. unbound. (Electronic technology series, v.15.)

Radio & television news, Nov. 1956, p.185. 10 l.

"Deals with the principles and applications of inverse feedback as applied to various electronic devices . . . Text material is written for the student, technician, and engineer. Review questions throughout the text make the book suitable for home study."

Searles, Herbert L.

Logic and scientific methods; an introductory course. Ed.2. 378p. 1956. Ronald, New York, $4.25.

School science and mathematics, Nov. 1956, p.678. ⅝ p.

"The reviewer has read the book carefully throughout and reread a number of different sections. There are several impressions one gets from such reading. The first is that the book is scholarly and complete. The second is that it is not easy reading. While it may be used in an introductory course in logic, or in philosophy, it is likely that a student would profit most if he has some understanding of the nature of science and the logic of reasoning prior to using this book . . . It is a good textbook, and probably a good reference, for a scientist or mathematician to have." *George G. Mallinson.*

Shupe, Hollie W., & **Machovina,** P. E.

Manual of engineering geometry and graphics for students and draftsmen. 347p. 1956. McGraw, New York, $5.25.

Aeronautical engineering review, Nov. 1956, p.175. ⅛ col.

"In addition to the text material needed in engineering geometry, this book provides material for a more general coverage of graphic solutions. The material covered includes the fundamentals of orthographic projection and their use in the solution of the geometric problems of line and surface relationships, and vectors; and functional scales and their applications in conversion and sliding scales, alignment charts, curve fitting, and graphic calculus. In addition to the usual bibliography, there is a bibliography of Visual Aids—film material."

Product engineering, Nov. 1956, p.441. ¼ col.

"The student who uses this text must have a familiarity with standard drafting procedure and instruments and know the basic principles of plane and solid geometry, algebra and logarithms. He will learn the problem-solving capabilities of graphical techniques, here called analytic graphics or engineering geometry. After a description of orthographic projection of objects, points and lines, the authors define and show their interrelationships with planes and curved surfaces. Additional chapters cover map projections, vectors, graphic scales, nomographs, and graphic integration and differentiation."

Sinnott, E. W., & **Wilson,** K. S.

Laboratory manual for general botany. 333p. 1956. McGraw, New York, $3 unbound.

Bulletin of the Torrey Botanical Club, Sept.-Oct. 1956, p.390. 9 l.

"Although designed for use with their 'Botany: Principles and Problems' (1955), the authors believe this manual to be sufficiently flexible in scope to be used with success where other textbooks are adopted. Reference is made to no other source material however. Even 'Botany' is referred to only by chapter when approaching the appropriate sequence of exercises. There are a total of 103 exercises . . . Drawings are called for frequently; very few are provided. There are many questions to be answered, always a feature of Sinnott's approach." *J. A. S.*

Sneddon, Ian N.

Special functions of mathematical physics and chemistry. 164p. 1956. Interscience Publishers, New York, $1.75.

Physics today, Nov. 1956, p.46. ⅜ col.

"Prof. Sneddon has written a concise survey of the field . . . Intended for physics rather than mathematics students; it is written from the viewpoint of the mathematical physicist or the applied mathematician. The first chapter is an introductory one on the solution of ordinary differential equations in series and the second chapter discusses the general hypergeometric equation. The final three chapters of this small book are then concerned in turn with the Legendre function, Bessel function, and the Hermite and Laguene function . . . Should . . . serve as a refresher course or as a handbook of properties of special functions for the physicist working in those fields where these functions arise." *E. Richard Cohen.*

Snodgrass, R. E.

Anatomy of the honey bee. 334p. 1956.

Cornell Univ. Press, Ithaca, N. Y., $6.

Science, Oct. 19, 1956, p.730. ¾ col.

"Gives a detailed analysis of the gross structure of the adult bee. Most of the topics have a brief comparative introduction, and there is adequate consideration of development, histology, and the functional aspects of anatomy. The writing is clear and well organized . . . Will be a fundamental reference book, and an excellent textbook and manual for advanced students." *Roland Walker.*

Sperry Gyroscope Company, Limited.

Aircraft gyroscopic flight instruments. Ed.6. The Company, Brentford, Middlesex, England, 6s.

Engineer, Nov. 2, 1956, p.619. ⅔ col.

"A valuable aspect of this edition . . . is the opportunity to study some of the modern information presentations that have previously been discussed mainly in periodicals and brochures. The zero reader is described and the behaviour of its computer outlined, and then the remote gyro is introduced. The instruments peculiar to the Sperry integrated system, i.e. the compass indicator, the horizon flight director, and the pictorial deviation indicator are illustrated and explained."

Stacey, K. A.

Light scattering in physical chemistry. 230p. 1956. Butterworth & Co., (Publishers), Ltd., 88 Kingsway, London, W.C.2, 40s.

Chemical age, Oct. 13, 1956, p.73. 1 col.

"This timely book gives a good general account of the theory, techniques, uses and scope of the method in this field. About one-half is concerned with theory and practice . . . The rest of the book is concerned with the application of light scattering techniques to solutions of uncharged high polymers, proteins and polyelectrolytes . . . The author is to be congratulated on providing physical chemists in general, and polymer chemists in particular, with a very useful account of the main aspects of the theory, uses, practice and scope of a rapidly developing technique." *W. R. Moore.*

Sutton, George P.

Rocket propulsion elements. Ed.2. 483p. 1956. Wiley, New York, $10.25.

Aeronautical engineering review, Nov. 1956, p.182. ⅓ col.

"A broad treatment of the basic elements and the technical problems of the physical mechanisms, applications, and designs of rocket-propulsion systems . . . Now organized into three broad categories: (1) liquid propellant rockets, their working fluids, and their design; (2) solid propellant rocket fundamentals, working substances, and solid propellant rocket design; and (3) general principles of thermodynamics, chemistry, heat transfer, flight theory, historical background, and testing methods."

American aviation, Sept. 24, 1956, p.8. 8 l.

"A comprehensive treatment of solid and liquid propellant rockets by an author who heads engineering at North American Aviation's Rocketdyne division . . . Covers both U.S. and European developments and discusses rocket engine design, flight performance and testing."

Automotive industries, Oct. 15, 1956, p.124. ¼ col.

"Revised to include a broader treatment of the basic elements and technical problems of rocket propulsion, as well as a more comprehensive discussion of the physical mechanisms, applications, and designs of rocket propulsion systems . . . Plentifully supplied with tables and curves, and . . . profusely illustrated with photographs and drawings . . . Also includes a new bibliography, which lists approximately 600 references."

Ordnance, Nov.-Dec. 1956, p.498. ⅛ col.

"In this text Mr. Sutton has done a remarkable job of presenting in one volume the fundamental and the practical aspects of the various phases of rocket propulsion. This book presents those basic elements, principles, and technical problems that are clearly understood in the present state of the art . . . Highly recommended as a reference to those engaged in the rocket-propulsion field and as an orientation for those about to enter the field." *S. M. Smolensky.*

Swiggett, Robert L.

Introduction to printed circuits. 101p. 1956. John F. Rider, New York, $2.70 unbound.

Factory management and maintenance, Nov. 1956, p.318, 320. ¼ col.

"Printed circuits are turning up in more and more electronic components — not just communications equipment, but controls and the like. And so it behooves the smart plant man to have an idea of how they're produced and how they're maintained. This little book covers that subject in interesting form. Discusses all the important production methods, and illustrates them well with pictures and diagrams. Interesting, informative, and broad-scope—though not a complete handbook of engineering information."

Thompson, A. G.

Arc-welded machinery construction in mild steel. 36p. British Welding Research Assoc., 29 Park Crescent, London, W.1.

Product engineering, Nov. 1956, p.398. ¼ col.

"This concise, well written and clearly illustrated booklet fills a long felt need for clear and authoritative information in the field. After comparing welded steel with cast steel and riveted construction, it enumerates the principles of welded structure design, it analyzes static and fatigue loading and allowable stresses, and it offers a wealth of design and fabrication details."

Transistor applications. 116p. Raytheon Mfg. Co., 55 Chapel St., Newton, Mass., 50c.

QST, Oct. 1956, p.150. 10 l.

"A collection of articles taken from the popular magazines, describing over fifty items of equipment using transistors . . . Applications range from current amplifiers for milliammeters through broadcast receivers of simple design, including audio amplifiers, monitors, control devices, oscillators of various types, and numerous special gadgets. Practically all material is written around the CK722 transistor and so is applicable to junction types designed for use in the audio and i.f. range. Anyone with an urge to get acquainted with transistors will find plenty of things to try in this book."

Truter, E. V.
Wool wax chemistry and technology. 368p. 1956. Interscience Publishers, New York, $8.75.

Soap and chemical specialties, Nov. 1956, p.79. ¼ col.

"Claimed to be the first critical and comprehensive survey of existing knowledge about the co-products of the fleece, namely wool-wax and suint. More than 600 references are quoted . . . Covers occurrence; principles and methods of extraction; refining and chemical processing; chemical constitution; extraction of important components. There is a chapter on uses of wool wax and its derivatives in such specialty products as rust preventives, superfatted soaps and cosmetics."

Van Alphen, J., and others.
Rubber chemicals. 164p. 1956. Cleaver-Hume, London, 31s. net.

Rubber journal, Sept. 29, 1956, p.403. ⅝ col.

"Comprises a list of certain classes of compounding ingredients, with the names of the manufacturers or suppliers and the trade names used, and is based on material compiled originally for use in the laboratories of the Rubber-Stichting. For each material, the chemical name and chemical formula are given where possible and also usually a very brief description of the properties of the material . . . An alphabetical index to all trade names is provided so that any material can readily be located in the book if all that is known is the trade name. The text is in English and German arranged side by side . . . Fills a gap in rubber literature and will be valuable to rubber scientists and technologists for reference purposes."

Wade, Thomas L., & **Taylor,** H. E.
Fundamental mathematics. 380p. 1956. McGraw, New York, $4.75.

Product engineering, Nov. 1956, p.390. ⅜ col.

"Intended as a survey and text for students not prepared for the usual first year college mathematics . . . Provides a foundation for such courses. The authors have tried to strike a balance between teaching mathematics for understanding and teaching for manipulation. The basic ideas of elementary algebra, for example, are covered in a manner intended to give the student a more unified grasp. It is expected that the volume will also be of use to persons in industry needing to review their mathematics through self-study."

Weingartner, C.
Machinist ready reference. 121p. Prakken Pub., 330 Thompson St., Ann Arbor, Mich., $1.50 unbound.

American machinist, Nov. 5, 1956, p.249. 11 l.

"Reference material compiled in this handbook contains nearly 100 selected tables and charts used daily by machinists. Contents . . . range from mathematical formulas, drills, tapers, threads, milling, shaping, gears, gages and tolerances. Essentially the book provides a quick reference to metalworking data for machinists, tool designers and apprentices."

Wertheim, E., & Jeskey, Harold.
Introductory organic chemistry. Ed.3. 476p. 1956. McGraw, New York, $5.50.

Journal of the American Pharmaceutical Association, scientific edition, Oct. 1956, p.712. 10 l.

"A general text on organic chemistry intended to acquaint the student with the subject, and it does not attempt to go beyond fundamental concepts. The treatment is clear and as simplified as possible. Teachers whose students are not science majors will find this book helpful. Study question are given at the end of each chapter. A glossary of chemical, biological, and medical terms, a list of reference books, and a subject index are appended."

Willshaw, H.
Calenders for rubber processing. 62p. Institution of the Rubber Industry, 4 Kensington Palace Gardens, London, W.8, $4.

Rubber age, Nov. 1956, p.360. ½ col.

"According to the author, its object is to describe the uses and developments of calenders in a manner that will appeal to all classes of persons engaged in the rubber industry. Accordingly, it cannot be regarded as a treatise on the designing, manufacture and installation of calenders, but it most certainly can be looked upon as an excellent outline of applications, starting from the pioneering work of Thomas Hancock."

Woodroffe, David.
Handbook of chrome tanning. 184p. 1956. Quality Bks., Teignmouth, Devon, England, 24s. 8d.

Journal of the Society of Leather Trades' Chemists, Oct. 1956, p.344. ½ p.

"The main part of the book is devoted to detailed descriptions of the processes involved in making various types of chrome leather . . . A minimum of chemistry is incorporated to facilitate the explanation of the processing details, which are really intended for those interested more in the actual making of leather than in the scientific principles involved. The approach is classical, and the result a comprehensive guide providing the tanner with a basis upon which to develop his processes according to his particular facilities and new methods of technology . . . Written in a simple and clear style which makes the wealth of information it contains easily accessible to everyone."

Zbar, Paul B., & **Schildkraut, S.**
Basic electricity. 84p. 1956. McGraw, New York, $1.75.

Midwest engineer, Sept. 1956, p.26. ⅓ col.

"Zbar and Schildkraut are on the RETMA teaching staff and aim . . . to provide a good background for specialized training in any branch of electronics. Current products, practices, and techniques of the industry are employed . . . Written in clear, simple, easy-to-understand language. Basic principles are stated, explanations of specific instruments are given, and a discussion of circuit parameters is included. Each job is followed by questions that will test the student's understanding of the completed work." *R. G. G.*

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Errata in Volume 22

For "**Brook,** John. Mteric system and British equivalents" (p.44) read **Brook,** John. Metric system and British equivalents.

For "**Fiesz,** Frigyes, & **Sz.-Nagy,** Bela" (p.86) read **Riesz,** Frigyes, & **Sz.-Nagy,** Bela.

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